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Preserving plants.—POLLACCI, speaking before the Italian Botanical Society,³² commends his method, proposed in 1900, for preserving plants in a watery solution of sulfur dioxid. Specimens so preserved in 1900 have retained perfectly their form and are in as good condition for sectioning as when fresh. He has improved the method of making the solution and has devised a means of retaining perfectly the green color. To make the solution, place sodium bisulfid in a large flask, add sulfuric acid drop by drop, and conduct the gaseous SO₂ through water, which quickly becomes saturated and may be preserved for use as needed. To retain green color immerse the material in a 1 per cent. watery solution of copper sulfate, leaving it 24 to 48 hours according to the consistence of the tissues; then transfer to the preservative solution.—C. R. B.

Teratology in *Salix*.³³—MOTT records various cases of teratology in the flowers of two Californian willows, *S. lasiandra* Benth. and a hybrid of *S. lasiandra* Benth. and *S. babylonica* L. In making the statement that no mention has been made for *Salix* of an intimate association of microsporangial and megasporangial tissue he overlooks an earlier account by the reviewer,³⁴ who described and figured equally intimate associations. According to MOTT, the abnormalities indicate that the ancestral *Salix* flower consisted of a pistil and two stamens with a four-parted perianth, the present unisexual condition having been reached by the suppression of the organs of one sex. Hybridization seems to offer the most likely explanation of the abnormalities.—CHARLES J. CHAMBERLAIN.

Nectaries of Cruciferae.—VILLANI has made an exhaustive comparative study of the nectaries of Cruciferae³⁵ and concludes that on the basis of their number the Cruciferae can be divided into four types, and on the basis of their position into generic groups. The diverse forms as to nectaries are referable to one primitive type, having four nectaries, two of which are at the base and external to each stamen, constituting an external dimerous cycle, and two at the base and between each member of each pair of long stamens, constituting an internal dimerous cycle. The tetramery of the corolla is only apparent, the whole flower being purely dimerous. The nectaries function both for securing cross pollination and protection.—C. R. B.

Morphology of *Chloranthus*.—Miss HELEN M. ARMOUR³⁶ has published the results of her study of *Chloranthus*, especially interesting as extending our

³² POLLACCI, G., Nuovo metodo per la conservazione di organi vegetali. Bull. Soc. Bot. Ital. 1905:242.

³³ MOTT, WILLIAM WARNER, Teratology in the flowers of two Californian willows. Univ. Cal. Publ. Bot. 2:181-226. pls. 19-20. 1905.

³⁴ BOT. GAZ. 23:147-179. pls. 12-17. 1897.

³⁵ VILLANI, A., Dei nettarii delle Crocifere e del loro valore morfologico nella simmetria floreale. Malpighia 19:399-439. 1906.

³⁶ ARMOUR, HELEN M., On the morphology of *Chloranthus*. New Phytol. 5:49-55. pls. 3-4. 1906.

knowledge among the more primitive Archichlamydeae. The development of the floral parts and both lines of sporogenesis were studied, the general conclusion being reached that the characters agree with those of the majority of the primitive Archichlamydeae. In the ovule the sporogenous tissue develops as a mass of cells, from which usually a single mother-cell is selected, a late differentiation of that cell which is quite characteristic of gymnosperms. The linear tetrad is formed, but there is the greatest irregularity in the selection of the functioning spore.—J. M. C.

Embryo of *Symplocarpus*.—C. O. ROSENDAHL³⁷ has made a preliminary announcement of a remarkable feature of the embryogeny of *Symplocarpus*. The endosperm destroys both integuments and pushes into the basal tissue of the ovule. There is a short, thick suspensor, and at this end of the “protocorm” both hypocotyl and plumule are differentiated. The developing embryo destroys the endosperm and all of the ovular tissue except at the very base, and thus comes to lie free in the ovary cavity! This means that the “seeds” of *Symplocarpus* are naked embryos. The full paper, with illustrations, will be looked for with interest.—J. M. C.

Nucleoli in mitosis.—The nucleoli in the vegetative cells of *Equisetum arvense*, according to G. BARGAGLI-PETRUCCI, play an important part in mitosis.³⁸ In the resting nucleus there is a single centrally placed nucleolus. At the beginning of mitosis, the nucleolus divides, one of the daughter nucleoli passing to each pole of the nucleus, where it perforates the nuclear membrane and passes to the apex of the achromatic figure.

While the figures are doubtless accurate, much more evidence will be required to establish the contention that the nucleoli play such a rôle in mitosis.—CHARLES J. CHAMBERLAIN.

Resistant potatoes.—The selection of races resistant to disease is one of the most promising methods of meeting many kinds of plant diseases. The resistance of Irish potatoes to blight, tuber rot, and scab has been worked out in an admirable way by STEWART.³⁹ More than one hundred and fifty varieties were tested and their difference in susceptibility is graphically represented. In general, varieties having strong, woody, moderately branched, upright stems, and medium sized, rather thick, firm, hairy leaves were more resistant than varieties possessing weak, much branched, decumbent stems with large, thin, smooth leaves.—F. L. STEVENS.

³⁷ ROSENDAHL, C. OTTO, Preliminary note on the embryogeny of *Symplocarpus foetidus* Salisb. Science N. S. 23: 590. 1906.

³⁸ BARGAGLI-PETRUCCI, G., I nucleoli durante la cariocinesi nelle cellule meristematiche di *Equisetum arvense*. Nuovo Giorn. Bot. Ital. 12: 699-708. pl. 2. 1905.

³⁹ STEWART, W., Disease resistance of potatoes. Vermont Agr. Exp. Sta. Bull. 122. 1906.